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Rural Credit

Concept Of Security Has Changed

By K. K. SHAH (Governor of Tamil Nadu)

SINCE the beginning of the Green Revolution in the country during the later years of the sixties, the Government have been paying increased attention to fulfil the credit needs of the farmers, so that they may be able to procure all the inputs needed by them to increase production. Successive and effective steps launched by the Government have increased the flow of institutional credit to the farmers.

In the pre as well as post-Independence era, it was the cooperative credit movement that was regarded by expert opinion (official as well as non-official) as holding the key to rural indebtedeness and rural finance problems.

For the country as a whole the demands for short-term agricultural credit was estimated at Rs. 20 billion by the end of the Fourth Plan and for medium te m credit at about Rs. 5 billion. It was also estimated that the cooperative agencies would, at the most, be able to supply only about Rs. 7.5 billion. Therefore, it became very necessary that additional measures for filling in the credit gap had to be thought of. It was also considered necessary that efforts to mobilise rural savings should be launched with much greater vigour. Till the end of 1960's the commercial banks had been playing nil or negligible part providing any credit to the rural sector. Repeated directives from the Reserve Bank of India to the Commercial Banks to pay much greater attention to the agricultural sector and meeting their needs as much as possible had brought negligible response from them. They were concentrating all their energy in providing credit to commerce and industry despite the fact that the agricultural industry in this country was responsible for nearly 50% of the production of the country.

In the circumstances, the Government considered it advisable to nationalise the top 14 commercial banks in the country so that they could effectively carry out the directions issued to them from time to time by the Reserve Bank of India and pay the desired attention towards meeting the requirements of the rural sector.

Through the nationalisation of the commercial banks, the Government have succeeded in taking banking to the remote rural areas and have made nationalised banks instrument of saving and capital formation in rural area. The absence of the banking institutions in rural area was responsible for surplus money causing inflation and hoarding. There is now healthy competition between the cooperatives and the commercial banks.

After a careful study of availability of farm credit, Government have initiated a new programme by starting five rural banks in selected places in the country. These banks will be

(Contd. on page 7)

Words to Remember

[Excerpts from the speeches of the Prime Minister]

In an interview to an Iranian journalist, the Prime Minister said India was worried about the extension of military presence and confrontation potential into the Indian Ocean.

"We feel one presence attracts another and that military build-up by any single power sets in motion a vicious circle.

The expression "World Power" connotes nations which think they have a global interest and therefore want to have presence in various parts of the globe. Often it was their presence that made regions "sensitive". If their presence was not there, there would not be flash points. "That is why we favour disengagement and detente."

x x x

When communists came to power in China, India was among the first to give recognition to them for it realised that they were and would remain a fact of life. Later, despite Chinese aggression and their hostility towards India, "we continued to support their entry into the United Nations."

"This annoyed the West. Now the same people seem to think that they have discovered, the People's Republic of China.

"India had always tried and would always wish to be a good neighbour to the countries around it. "Our scientific advance and whatever strength we develop is only to solve our own domestic, economic and social problems and to protect ourselves from aggression. You must remember that we have had to repulse aggression five times at tremendous cost to our economy and our development plans."

x x x

"We are only at the beginning of the great transformation that must be achieved We have the inner strength and technological capacity to solve our problems. The initial battle has been won. A great deal remains ahead of us."

India had been consistently following a policy of making its own decisions while seeking friendship with all nations because of its conviction that the problems of poverty could be solved only in a climate of peace and co-operation.

Ultimately a nation's independence followed from its economic strength and the vitality and coherence of its political system, not only from its defence apparatus. "We have been able to build our economic strength particularly our basic industries."

It was over-simplification to say that democracy slowed down development or that dictatorship accelerated it.

Many dictatorships had failed to show results despite their wide powers. Democratic participation had been particularly successful in bringing about increase in agricultural output.

The mobilisation of resources was easier in a controlled system. "However we have been able to raise 80 per cent of our resources through our own people's savings".

THUS SPAKE THE MAHATMA

Peace is unattained by part performance of conditions, even as a chemical combination is impossible without complete fulfilment of the conditions of attainment thereof.

ASOKA SCENTED BETELNUT POWDER

Free India

SUNDAY, May 2, 1976

GOLD PLATING OF GOPURAMS

There is a heated controversy over the proposed gold plating of Kanchi Kamakshi temple vimanam.

The objections seem to be strange. Society can object to the hoarding of gold by individuals to be used as a weapon in his nefarious economic activities.

Wearing of jewellery by individuals may kindle the jealousy of the neighbours. It may even prove to be dangerous to the lives of its owners.

It is a fine idea of our ancients that any thing valuable and rare should be given to temples. Gods don't need these gold plated gopurams or diamond-studded jewels.

They are there to please the devotees.

A gold plated gopuram besides adding to the sanctity of temples, also attracts tourists. The funds are not provided by the secular Government.

Our temples provide the rare example in socialism common ownership of valuable things.

There is absolutely nothing wrong in allowing temples to accumulate wealth. Temples play a part in maintaining peace in the State even during difficult economic crises.

GEOLOGY AND ARCHAEOLOGY

Robert Bruce Foote's Contributions

By K. K. SHAH
(Governor of Tamil Nadu)

THE Geological Survey of India as part of their 125th year celebrations, in collaboration with the Archaeological Survey of India which will soon be completing 125 years of service and the Government Museum, Madras which is 125 years old organised a seminar on Robert Bruce Foote and his contributions to Geology and Archaeology Mr. K. K. Shah, Governor of Tamil Nadu inaugurated the seminar on April 28. The Geological Survey of India which is the 2nd oldest established Government department of the country and the 3rd oldest Geological Survey of the World, has a creditable record of service to the Nation. It has been playing a leading role in the scientific, industrial and agricultural advancement of our country.

The Geological Survey of India founded in 1851 with one Officer has grown up to its present stature with over 1,500 technical officers and supporting staff during the last 125 years of its service and has developed noble traditions of service to the Nation particularly in times of crisis such as earthquakes, drought etc., like the Army.

Robert Bruce Foote was one of the pioneers who served the Geologocal Survey of India with great dedication for 33 years. He was not only a talented Geologist but a reputed prehistorian acknowledged as the Father of Indian Pre-history. He joined the Geological Survey of India in the year 1858 (along with Sir C. A. Oldham, William King and F. R. Mallet—other celebrities in Indian Geology) and was posted to the Madras Presidency where he spent most part of his life. His geological contributions covered a wide range of subjects in keeping with the extensive areas he surveyed and included elucidation of the Geology of not only the Crystalline rocks of which the Peninsula is principally made of, but the stratigraphy and the palaeontology of the sedimentary formations. Working along with Dr. William King, he surveyed practically the whole of Tamil Nadu, a good portion of Andhra Pradesh, parts of Karnataka and Maharashtra and recorded the occurrence of varied assemblages of rocks extending in age from the Archaean to Miocene (20 million years).

His studies in Tamil Nadu, to mention briefly, brought to light the magnesite deposits of Salem—the only deposit of its kind in the country—the crystalline limestones near Sankaridrug which support a flourishing cement industry, chromite and the magnetic iron-ores of Kanjamalai near Salem that await development for the steel industry. The Upper Gondwana (Jurassic) formations comprising continental and marine deposits along the Coramandal coast extending from the Godavary valley in Andhra Pradesh to Sivaganga in Ramanathapuram district in Tamil Nadu were also discovered by him. His surveys also included the Cuddappah, Kurnool and Kaladgi basins of Purana formations, with varied lithology and structure.

One of the most important contributions made by Bruce Foote to Indian Geology was the recognition of schistose group of rocks—the Dharwars with which most of the gold deposits are associated in the South Indian Crystalline Complex.

In the field of Palaeontology Bruce Foote made a valuable addition to our knowledge of the Pleistocene fauna of India by his discovery of a new species of Rhinoceras from the black cotton soils of Belgaum.

The papers published in the records and memoirs of the Geological Survey of India testify to Robert Bruce Foote's Scientific excellence as a critical observer of rare versatality.

BRUCE FOOTE AS AN ARCHAEOLOGIST

Robert Bruce Foote discovered the first hand axe tool in India and became the pioneer in this branch of research. He sustained the aptitude he developed for Archaeology in the later part of his life and actively pursued it to gather all data that would throw light on the history of human development including habits and culture of the pre-historic man. He was greatly inspired in this by the archaeological discoveries made by contemporary English Geologists like John Evans and Hugh Falconer. When on 30th May, 1863 he connected a genuine chipped implement in a ballast pit in the lateritic gravel on the parade ground at Pallavaram, he was a greatly satisfied man as he had been very closely looking out for such possible traces of early human art in South India like his counterparts in England.

His interest in Archaeology did not stop with the palaeolithic period but extended to the Neolithic, iron age and later periods also. He made several remarkable finds of Neolithic periods in several parts of Mysore State and Salem and North Arcot districts of Tamil Nadu etc., which still await full investigation.

He discovered a total of 459 sites of which 42 belong to the palaeolithic age, 252 to the Neolithic and 17 to the early Iron-age and 5 to uncertain periods. An extensive collection of materials comprising not only of specimens found in the Madras Presidency and the neighbouring States of Mysore and Hyderabad, but also from Baroda and other parts of Northern India got accumulated with him. This entire collection was purchased by the Madras Government in 1904 and a special room was built for their display in the Art and Ethnological Section of the Madras Museum. Bruce Foote was obviously well aware that the multi purpose Government Museum originally began as a Museum of Practical Geology. He therefore seems to have considered the Madras Museum to be the fittest repositors of his collections. They continue to be the prized possession of the Museum where the art and archaeology sections are the chief centres of attraction for overseas visitors., and a standard reference for all the investigators in the Pre and proto-historic periods of South India.

Bruce Foote was not a mere collector of antiques. He had profound insight into the geological and archaeological set-up of the periods to which they belonged and therefore he himself prepared a detailed catalogue of his collections giving all details of the findsspot, the nature of the find, their typology etc., The catalogue entitled '*The Foote Collection Of Indian Prehistoric and Proto-historic Antiquities*' was published in 1916 nearly 4 years after his death, Fortunately, he had written a preface to this Catalogue wherein he explained how he began to take interest in archaeology though his official duty was geological survey. About the catalogue he wrote that 'The greatest value of the collection is the great light that it throws upon the geographical distribution of the people of the several ages'. The catalogue still sheds light on the unknown and little known sites of our country. The beautiful map which he has given in his book showing the distribution of sites of various periods continues to serve as a guide for the explorers in the field. His shrewed observations on the remains of the Neolithic and Iron-age periods have since been proved to be rare. Some of the well-known and well studied sites of to-day like Attirampakkam (in Chingleput dist.) or Paiyempalli (North Arcot Dist.) Adichanallur (Tirunelveli dist.) were first noticed by him. Though he

(Contd. on page 7)

Neyveli Industrial Complex

Neyveli Lignite Corporation Ltd., a multi-crore public sector undertaking, runs one of the largest industrial complexes in the Country. The Industrial Complex, situated about 225 kms from Madras, has the largest opencast lignite mine equipped wi h modern machinery.

A three day National Seminar on Opencast Mining was held at this industrial complex recently. The Seminar was inaugurated by Mr. K. C. Pant, Union Minister for Energy.

The Seminar was attended by over 200 delegates from all over the country. Experts from foreign countries, numbering sixteen, also participated in the deliberations.

Mr. K.S.R. Chari, Secretary, Ministry of Energy, New Delhi, presided and Mr. S. Yegneswaran, Chairman - Managing Director, welcomed the delegates and other visitors. Mr. D. P. Gupta, Director, proposed a vote of thanks.

A press party was taken to Neyveli on this occasion and the pressmen were taken around the various projects in the complex.

The Neyveli Industrial Complex consists of:

An open-cast Mine to extract 'Lignite'.

A Thermal Power Station to generate electric power, using lignite as fuel.

A Fertilizer Plant to manufacture 'Urea' based on lignite as raw material

A Briquetting & Carbonisation Plant to process lignite into 'Leco' and important basic organic chemicals.

A Clay Washing Plant to supply refined white clay, 'Nekolin'.

DISCOVERY OF LIGNITE

The occurrence of lignite in this part of the country was known previously but came to prominent notice in the later thirties of this century, while drilling bore-wells for irrigation purposes in the region between Neyveli and Chidambaram. During 1943-46 the Geological Survey of India drilled a number of bore holes which revealed the availability of lignite over an area of about 23 sq. miles in and around Neyveli. Further investigations carried out by the State Government in 1948 proved the existence of lignite deposits, estimated at 2000 million tonnes, spread over an area of 100 sq miles, the largest lignite reserves in the country. Recent investigations indicate the presence of over 3300 million tonnes of lignite over an area of about 480 sq. km. or 185 sq miles.

The lignite reserves at Neyveli seem to have been formed of vegetal matter over water—logged areas resulting in artesian aquifers, or waterbearing strata below the lignite seam. Such a condition is not known to exist anywhere else in the world.

OPEN-CAST MINE

An open area is exploited to extract lignite occurring at an average depth of about 60 metres. The average thickness of the lignite seam is about 13 metres. An area of about 14 sq K.M. (5½ square miles) holding about 200 million tonnes of lignite has been taken up for mining.

The Open-Cast Mine was inaugurated by the then Prime Minister, Shri Jawaharlal Nehru on 20th May, 1957. The first seam of lignite was exposed in August 1961.

A special feature of the Neyveli lignite deposits is the presence of water beneath the Lignite bed, exerting an upward pressure of about 6 to 8 Kg./Sq. cm. This problem which appeared to be insurmountable at first has been overcome by uninterrupted pumping of the water at a rate of about 35000 GPM. The presence of underground water has proved to be a blessing in disguise as it meets the large requirements of water for the Industrial Units and also the Township.

Open-cast mining is carried out with specialised mining equipment consisting of bucket wheel excavators, conveyors and spreaders, which is the method adopted in similar Mines in Germany and Australia.

Two other major problems in the Neyveli Lignite Mine, which are not met with in similar Mines in Germany and Australia, are (i) the very hard nature of the overburden comprising Cuddalore sand-stone which makes cutting very difficult and (ii) the tendency of the soil to become very slushy during rains which makes movement of both men and machines in the Mine extremely difficult. The first problem is met by systematic blasting of the overburden and improved design of the bucket wheel teeth. The second problem is tackled by a carefully planned drainage system which drains the storm water into sumps from where it is pumped out by large capacity pontoon pumps.

THERMAL POWER STATION

The Neyveli Thermal Power Station has been constructed in three stages: first 250 MW, next 400 MW and third 600 MW. The 600 MW Station has been in operation since 1970.

The entire power generated after meeting the needs of the Power Station auxiliaries and the Project is fed into the State Power Grid. Neyveli supplies about 40% of the power demand in the State.

Since the present capacity of Mine is inadequate to supply lignite for optimum generation at the Power Station, pending expansion of the Mine capacity, 2×50 MW Units of the Power Station were converted for operation on furnace oil in 1974. These two Units are operating at

(Contd. on page 6)

THE FAMOUS ASTROLOGER
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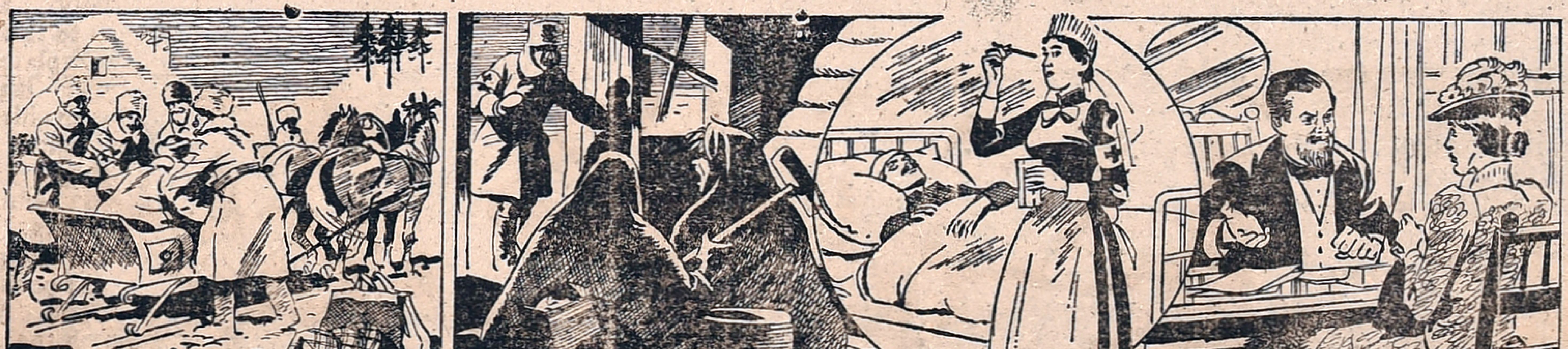
Women Of Courage — Kate Marsden



So heavily weighed down were they in their quilted coats and sheepskin overcoats, their felt boots and leather over-boots, that it took three hefty Russian policemen to heave Kate Marsden and her companion Anna Field on to their first sledge during their journey across Russia to Siberia in 1891.

Kate laughed cheerfully but this was to be no joyride for she was embarking on a grisly expedition to the Siberian lepers. She had first become aware of the plight of lepers when she had come across two in a miserable hut while working with the Russian Red Cross in the Turko-Bulgarian war in 1877.

Still only 31. Kate Marsden had already packed a lot into her life in an age when most middle-class single women led constricted lives. She had trained as a nurse and after her service in Bulgaria had practised nursing in England and New Zealand, but the terrible fate reserved for lepers continued to haunt her.

While in Moscow to receive a medal from the Russian Red Cross in 1890. Kate charmed the Tsarina, as a first step in her fight for permission to study the conditons of lepers in Russia. After an exhaustive journey, which included the Near and Middle East, she consulted Pasteur in Paris and returned to Moscow.

(Contd. on next page)

FUN AND LAUGHTER

STIMULATING COPY!

A veteran theater owner sought to stimulate his potential audience with a huge announcement painted on the side of a 'Cast of Broadway Players." Only when the painter's rigging had been lowered was it discovered that the sign read: "Cast Off Broadway Players."

* * *

PLAYING SCHOOL

One sister is just crazy about school. The other and younger one, is to put it mildly, considerably less enthusiastic.

The other day the older sister suggested: "Let's play school."

"All right," returned the younger one, grudgingly, "but let's play I'm absent."

* * *

DEDICATION

An author dedicated a new book to his wife, without whose absence, he said, it could never have been written.

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THE DIFFERENCE

'How does your daughter like America?" a woman refugee was asked by a friend.

"Vunnerful!" the woman replied enthusiastically. "She married an American boy—he helps her with the house, he vashes the dishes, he stays wit' the baby when she vants t'go out —everything for her he does!

"And how's your son doing?" inquired the friend.

"Oh, the poor boy; is terrible!" she moaned. "He married an American girl—he has to help her wit' the house, an' vash the dishes, an' stay wit' the baby when she vants to go out—everything for her he has to do;"

* * *

SHE-BEARS!

Mr. Briggs: "I don't like the looks of our new girl."

Mrs. Briggs: "But dearest, think of the reputation for cooking she bears."

Mr. Briggs: "But who on earth wants to eat she bears?"

* * *

CLEVER KID!

Teacher: What number is "Trousers; singular or plural?

A Clever Student: Sir, It is singular at the top and plural at the bottom.

* * *

EMPTY!

"I keep an excellent table," said a lady, disputing with one of her boarders "That may be true, ma'am," says he, "but you put very little on it."

ABSENT MINDED

The man, who is noted for his absent-mindedness, awoke one Saturday morning with the shocked realization that he'd had a dinner date at a lady's house the preceding Wednesday night. He dashed to the telephone, called her and gurgled breathlessly: "My dear, I want to apologize About Wednesday night—you *must* forgive me. I don't know how it could have happened. Now please say you'll give me another chance."

There was a stony silence on the other end, broken finally by her cold voice: "I don't know what you're apologizing about. You were *here* Wednesday night."

* * *

MY ONLY ONE!

In a stationery store a young sailor seemed unable to find just the right kind of Valentine greeting card.

"May be I can help you." suggested the saleslady.

"I'm looking for an expensive looking card inscribed 'To My Only One'," was the reply. The girl went to the backroom and smilingly returned with the desired specimen. "Swell," said the sailor. "Gimme half a dozen!"

* * *

REALLY HARD UP!

One W.A.C. was hard up. So, when she received a brassiers as a gift from a soldier, she wrote to him without thinking, "I wish you had sent the money. I'm flat busted."

Literally Speaking

Mr. Creighton Van Kretch was looking around for valets and finally, Ivan Popnikov came to apply for the job. And Mr. Van Kretch was very, very rich and he said—it's very, very important that I ask you a question. Did your parents come from Russia? He says, no—they didn't. So he got the job. After a few weeks, Mr. Van Kretch called him and said, why did you act under false pretenses? We've done a litte investigating and examination around here, and you lied to us. Why did you say that your parents didn't come from Rsusia? He says, they didn't. They're still there.

PRESS FREEDOM

A Hollywood tailor shop sports this sign in the window. "We believe in freedom of the press: for every three suits we dry clean, we give you one free press."

* * *

PORTER'S PUN!

Old Lady (on platform): "Which platform for the Bombay tram?'

Porter: "Turn to the left and you'll be right."

'Don't be impertiment, my man."

"All right, then; turn to your right and you'll be left!"

* * *

DEATH KNELL

Walter: 'Did you ring, sir?"

Inate Customer: "No, I did not ring. I was tolling the bell for you. I thought you were dead."

From previous page

Women Of Courage

On her tour, Kate had heard that in Siberia lepers suffered even greater miseries than elsewhere and decided to investigate. taking with her Russian-speaking Anna Field. During months of gruelling sledge-travelling in freezing cold, the women sustained themselves almost entirely on long-keeping English plum pudding and tea.

The going proved too hard for Anna and Kate continued alone, taking four months to reach the dreary town of Yakutsk. It was the easy part that was over. Now she faced a 1000-mile ride to Viluisk and arranged for an escort of 15 men, so impressing their Cossack leader. Jean Procopieff, that he proved 30 horses freed.

Bravely, Kate, a novice horse woman, approached her rather wild pony on the first day. She was less worried by the extreme discomfort of the heavy wooden saddle than the possible impropriety of wearing trousers and riding astride. But nothing would stand in the way of her mission.

It was an appalling ride in stifling heat the rough treacherous bogs and forest fires, with frequent thunder-storms and swarming mosquitoes making nights spent in the open a sleepless torment. There was no plum pudding now. only nauseating rough food and Kate arrived at Viluisk exhausted and frail.

Women Join U. S. Military In Record Numbers

By HELEN D. SEBSOW

MORE and more women are enlisting in America's armed forces.

Among the reasons the beginning of a new social movement for women's rights in the 1960's and the end of compulsory military service (for men) in 1973. Both have helped to produce a new-look armed services—a military where women play a greater and more visible role.

When the draft ended the services worried about getting enough volunteers. And women became a more important resource, their numbers increasing from 55,400 or 2.5 per cent of military personnel in 1973, to 97,000 or 4 6 per cent in 1975. The projected figure for 1977: 120,000, or 5 6 per cent.

The Army, Navy and Air Force all report that more qualified women are interested in serving than there are available positions. As a result, entrance requirements for women are often tougher than they are for men. Those women who are accepted often have to wait until a slot opens.

Why do women join the military? For the same reasons says William K. Brehm, Assistant Secretary of Defence, that men do usually either on the-job training or educational benefits. They can become radar technicians, communications specialists, computer analysts, medical aides or specialists in a variety of other fields. And if they want to attend college in their spare time, they can complete two years during a four-year enlistment. The military pays 75 per cent of the cost.

The promise of meeting new places, and most especially, the security of a full-time job are some of the other reasons women give for joining the armed services.

Women are also enlisting in the Reserve Officers Training Corps (ROTC), a year-round, college-based training programme.

Again, for women as for men, motivation is largely founded in money and career development; A recruit in ROTC basic training gets about $500 for the summer plus $100 a month on returning to college in the fall. One female recruit at Southwest Missouri State University explains, "I have a youngster and I need a job." Another, at Ohio State University, wants to enter Republican Party politics and feels "this is a good credential for public office."

Many bright young women also want to enter the Army's Military Academy in West Point, New York, the Naval Academy in Annapolis, Maryland, and the Air Force Academy in Colorado Springs, Colorado. And, beginning in June 1976, they will be able to enter these elite military institutions for the first time.

Women in the armed forces, of course can do almost anything men can and get the same pay for it. They can, among other things, join the military police and fly helicopters and airplanes.

In fact, military authorities are finding that women can capably fill many of the jobs they once thought only men were strong enough to perform.

Although women cannot hold combat positions, they can train for combat. The Naval Academy is preparing men as well as women for combat. The Air Force and Army academies, however, are more conservative in this respect and, for the time being, are not offering any extensive combat training.

Captain James Weaver, a 31-year-old combat veteran in charge of women's rifle training at Fort McClellan, Alabama, comments, "When you get right down to it, women with guns are just like men with guns—It's a matter of eye-hand coordination."

And Army Major General Jeanne M. Holm predicts that the day is not far off when "army combat arms will be open to women except those where sheer brute force is essential to insure victory."

More Than 70 Kinds Of Cancer

Bonn (DaD) – The cancer menace has yet to be beaten despite concerted international effort in medical research.

According to a report published by the Bonn Health Ministry one death in five is currently attributable to cancer in the Federal Republic of Germany.

Unless substantial changes are accomplished between thirty and forty per cent of the population will soon suffer from a tumour at some time in their lives. Only one in ten stands a chance of survival at present.

There are more than seventy kinds of cancer listed in Ministry statistics.

About ten of them are so common as to be of special importance. They include stomach cancer, throat and lung cancer, cancer of the intestine, prostate, womb, kidney, bladder and breast.

The report estimates that there are some 200,000 new cancer cases a year. International cooperation is essential if the scourge is to be beaten.

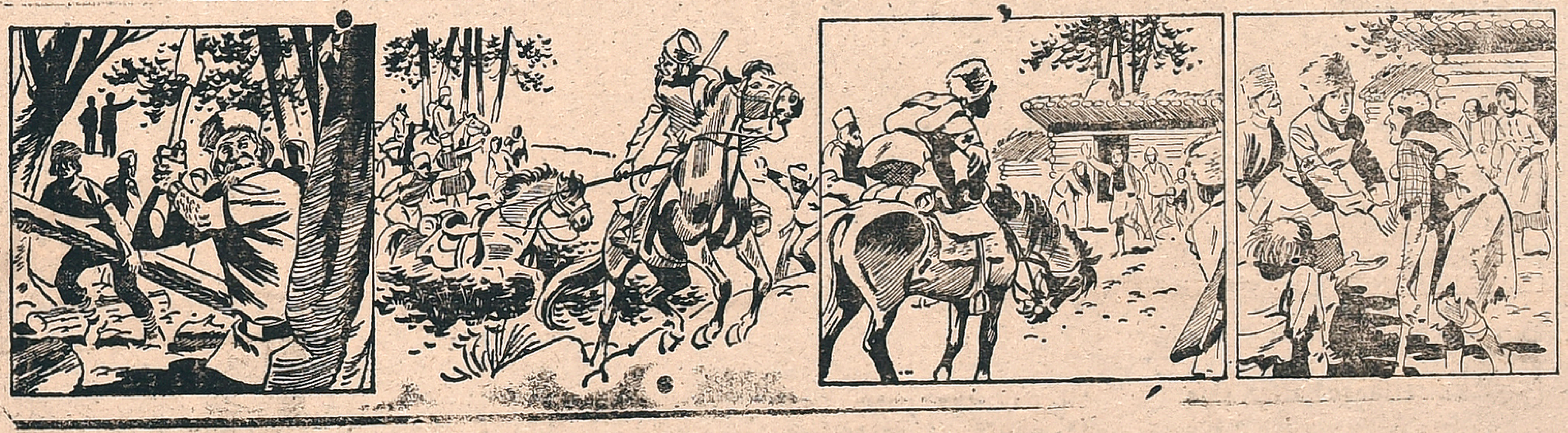
MAKES HOLES!

Sailor: "Did you hear about the chief? He drank some sulphuric acid by mistake last night."

Recruit: "Hurt him?"

Sailor: "Naw only thing that bothers him is he makes holes in his handkerchief every time he blows his nose."

Kate Marsden



After only a brief rest. Kate formed a committee from the village authorities who, although they had previously done little to help the lepers, were inspired by Kate's crusading spirit and gave her every assistance. The villagers left their summer field work to form volunteer work parties cutting paths through the dense forest.

Kate would accept nothing on hearsay and accompanied by the inspector of police, the priest and other villagers, made journeys totalling 1000 miles into the forest to find the isolated leper settlements. On their wild, shaggy ponies, they often sank into the marshy ground, fell into holes and stumbled over hidden roots.

They found their first settlement of two crude huts beyond a large lake. As Kate and her party approached, the lepers, who had been driven from their homes and completely rejected by society, stared in amazement, then eagerly started limping and crawling towards them, the sighted leading the blind.

Very moved, Kate dismounted and walked among them fearlessly, comforting people who had ceased to hope. Then she unpacked her supplies. She found one girl of 18 who was not afflicted, having been born to a leper mother and persuaded the local police inspector to take her into his home as a servant.

(Contd. on next page)

From page 3

NEYVELI COMPLEX

optimum level. It is proposed to convert these two Units back to lignite fuel after the capacity of the Mine is raised to 6.5 million tonnes of lignite.

FERTILIZER PLANT

Nitrogen is an essential soil nutrient for the cultivation of crops. Urea with 46% nitrogen content produced at the Neyveli Fertilizer Plant is an ideal fertilizer and is popular with the farmers in this region.

The Neyveli Fertilizer Plant has a capacity of 465 tonnes per day and was commissioned in 1966. The equipment for the Plant was supplied mainly from West Germany and Italy.

Raw Lignite from the Mine is crushed, dried and gasified in Winkler Gas Generators, using steam and oxygen. Ammonia is synthesised by the Montecatini process and urea by the total recycle process. The Fertilizer Plant based on lignite at Neyveli is the only one of its kind in the World at present. The process adopted is considered to be out of date now and the plant has not attained its optimum level of production.

It is proposed to convert the feed-stock of the Plant from lignite to fuel oil. The oil gasification process proposed to be adopted will be the one developed by Shell Research Limited and for desulphurisation and decarbonisation Benfield process is proposed to be adopted.

The Plant produces carbonised lignite briquettes, a smokeless fuel, sold under the trade name "LECO".

Raw lignite containing about 56% moisture is crushed and dried in steam driers to reduce the moisture content to about 10%. The dried lignite is compressed and pressed through extrusion presses to yield uniform briquettes. These briquettes are then carbonised in low temperature carbonisers to form carbonised briquettes.

The capacity of the Plant is about 3,27,000 tonnes of carbonised briquettes per year.

The Plant was supplied by a consortium of West German firms and was commissioned in 1966.

The gas liquor received from the carbonisers is processed in the Tar-Products unit to yield a number of valuable by-products such as, Tar, Dephenolised oil, Carbolic acid, Ortho Cresol, Meta-para Cresol, Xylenols and Multivalent phenols. These chemicals are used in a wide range of chemical and plastic industries.

The char fines that are obtained along with the briquettes are purchased mainly by cement factories and brick kilns. It is also used in the manufacture of calcium carbide and active carbon.

CLAY WASHING PLANT

Excellent white china clay deposits occur immediately above the liginite seam.

The Clay Washing Plant has a capacity to produce about 6000 Tonnes of washed clay a year.

The Plant was commissioned in December, 1961.

Part of the washed clay produced is pulverised and marketed.

The raw clay occurs in patches in the Mine and has to be picked without affecting the Lignite mining operations.

The white clay is marketed under the trade name "NEKOLIN". White clay is used in a number of industries such as manufacture of electrical insulators, sanitary-ware, ceramics, crockery and also in paper mills.

Pulverised Nekolin is used in rubber and cable manufacturing industries.

NEYVELI TOWNSHIP

The Neyveli Lignite Corporation employs about 17,900 persons of various grades-skilled, semi-skilled and unskilled workers and technical, non-technical and financial cadres. To provide suitable accommodation for them at the prescribed standard, a Township in an area of 1280 hectares has been raised with about 9200 quarters.

The Township has been designed on the principle of neighbourhood planning consisting of several rectangular blocks of 3000' x 2400' with peripheral roads for each block. There are eight types of residential quarters for the various pay groups. While space requirements differ from type to type, depending upon the salary of the occupant, modern amenities such as electricity, running water, sanitary fittings etc., are provided in all types of quarters. Water lines, sewerage lines, power lines, stormwater drains etc laid over the area provide the basic necessities of a modern town. The township is designed as a garden city with adequate open land for flower and kitchen gardens around the quarters.

WELFARE

Medical, educational, recreational, shopping etc. facilities for the population of the township are provided by the Corporation. A 200-bed General Hospital with separate wards for Medical, Surgical, Orthopaedic, Paediatric, Ophthalmic, Skin, ENT, Industrial Hygiene and Maternity cater to the medical needs of the population. A project hospital for the temporary colony and two dispensaries in the township also exist. Kindergarten schools, Elementary Schools, High Schools and Higher Secondary Schools, are located in the township. Most of the Schools are run by the Neyveli Lignite Corporation and a few are run by private organisations.

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LIFE OR FIRE?

Inquirer: "I have two wooden legs. Is it possible for me to insure myself.'

Agent: "What kind of insurance, life or fire?"

* * *

NICE IDEA!

The judge said: If this trial is interrupted by anybody, he will be thrown right out of the courtroom."

Hollered the prisoner: "Hooray for the judge"

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Women Of Courage

Kate Marsden

Kate collapsed after this first expedition into the forest but within 24 hours was off again. No group was too isolated for her to visit, no journey too difficult for her to tackle. Sometimes they were threatened by bears, and they had some terrifying experiences with subterranean fire.

All day the party had been aware of travelling near hollows in the ground, and on emerging from a forest at dusk saw the bare ground ahead on fire. It took all their efforts to prevent their horses from bolting and then to urge them forward, picking their way through the leaping flames.

So ill was she on the return ride to Yakutsk, Kate had to tie the horse's reins to her wrists. She was so afflicted by her ordeal that she was to be an invalid until her death in 1931. But her report on conditions was read in Russia and a hospital built from the proceeds of a book she wrote. Funds were raised in Russia, England and America,

When Kate at last reached Russia again, she was overcome by joy at the sight of a railway station and trains. One of the first women elected to the British Royal Geographical Society, this indomitable woman was, nevertheless, barred from its annual dinner because she would be the only woman among 200 men, most of them smoking. —END,

NEXT WEEK :—LADY MURIEL PAGET

Muscovite's Diary

Ivan Ivanov

29TH ANNIVERSARY OF SOVIET–INDIAN DIPLOMATIC RELATIONS

The 29 th anniversary of the establishment of diplomatic relations between the USSR and India was celebrated in the Moscow Friendship House. G. Shirokov, Vice-President of the Soviet–Indian Friendship Society, and Deputy Director of the Institute of Oriental Studies of the USSR Academy of Sciences, told the audience about the development of Soviet-Indian contacts over the past three decades. He pointed out that the establishment of diplomatic relations with India in April 1947, even prior to its official declaration as an independent state, resulted from the Soviet policy of support to the national liberation struggle of the Indian people. Shirokov noted that the fifties and the sixties were the period of the shaping up of economic and political corperation between the two countries and the seventies, of a qualitatively new type of relations. The new stage was reflected in the Treaty of Peace, Friendship and Cooperation between the USSR and India. By that time, Shirokov noted, India, in cooperation with the USSR, had laid the foundation of modern industry, heavy industry, above all, which is the cornerstone of economic independence.

The Treaty and the documents signed during the visit paid by Leonid Brezhnev to India in 1973, envisage new forms of cooperation planned for a long period. Shirokov said that these forms and methods found concrete expression in the resolutions of the Soviet–Indian Joint Commission on economic, scientific, and technological cooperation which held its third session in Moscow recently. The Commission discussed the problems of production-cooperation, cooperation on compensatory basis, and of joint participation in the construction of industrial projects in the third countries.

R. Vyas, Speaker of the Rajasthan Legislative Assembly, spoke at the function about the influence of the 1917 October Revolution on the struggle of the Indian people against British imperialism. Sri Vyas stressed that the USSR proved indeed that its friendship with India is disinterested and based on high principles. He said that this was clearly manifested in the crucial moments of his country's history. Speaking about the Soviet contribution to the economic development of India, Sri Vyas gave details of the work of the mechanised state-farms in Rajasthan, established with Soviet-aid, the famous Suratgarh among them.

Sri P. Sinai, Charge d'Affaires ad Interim of India to the USSR, spoke about all-embracing Soviet–Indian contacts which proceed from the community of interests far greater than commercial considerations. This is, above all, the desire of the two countr es to ensure world peace and security in the name of social and economic progress of mankind. Sri Sinai expressed confidence that Soviet–Indian cooperation would develop further for the good of both nations.

* * *

STREET LAMPS AND THE TELESCOPE

The town of Zelenchuk in the Caucasus is now installing special street lamps which throw all the light downwards. They show no light at all when viewed from above. The reason has nothing to do with the street-lighting in Zelenchuk itself. They are being installed because the present lights are interfering with the operation of a telescope in a Caucassion astronomical observatory. And the telescope is a good 25 miles away! This fact is a striking instance of the sensitivity of modern instruments.

The telescope is a giant, it's nearly 100 feet long, with a 237-inch mirror. Even though it is electronically opearted, intense precision is needed. A one-degree variation in temperature is sufficient to throw a star under observation out of focus.

Stars of the 24th magnitude—millions of times weaker than anything the naked-eye can see—can be deteted by this telescope.

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had the handicap of not having the facilities for excavation, he was able, in an almost uncanny way, to reconstruct accurately India's pre-history. Several of his brilliant deductions have been found to be true. Although he was aware of the importance of the sites he had indicated, he could not pay adequate attention to them because of his geological duties but hoped that one day more detailed investigations would be made by the Archaeological Survey of India. This hope has now been fulfilled to a great extent by the Archaeological Survey of India which took up the investigation of these Negalithic graves in an elaborate and scientific way and found remarkable evidence on the subject.

New High-Yield Barley

Gertrud Schmit has spent twenty years in Nordhorn, Federal Republic of Germany, breeding foodgrain. She has now finally perfected and registered with the EEC a new high-yield variety of barley named Ogra. It bears a striking resemblance to wheat and can be reaped and threshed like wheat. It also boasts six rows of ears and seldom fewer than 55 healthy grains. Little pest control is required and seeding calls for a mere 250 metric lbs per hectare. Seed will be available in large quantities next year. Agricultural experts are convinced that Ogra barley will gain worldwide acceptance and popularity.

Battery-Run Dustcarts

Pedestrian precincts have proved a walkover success in the Federal Republic of Germany. Battery-run dustearts have been specially developed to collect garbage from these pedestrian paradise with as little noise and pollution as possible. This nippy van is noiseless, exhaust-free and surprisingly economic. It runs on 15 pfennigs of electric power per kilometre, recharging its batteries from a conventional power point. The full battery is good for 100 kilometres (sixty miles) of stop-and-go driving. The van is easy to handle, accelerates well and manages 20% gradients. Any holder of a standard licence may take the wheel.

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an additional agency which will solely cater to the needs of the rural people. It is expected that fifty regional rural banks will be functioning in this country by the end of 1977.

The concept of security has changed. Fertility of land, expertise of the farmer and crop pattern are basic criteria for providing credit to the farmer. Productive labour is equally credit worthy. The vast resources that branches of nationalised banks have collected from rural area are enough to provide security for bad debts. The difference between the interest at which deposits are accepted and the interest at which loans are given provides a margin of more than Rs. 150 crores which are more than enough to meet the shortfall in recoveries. Bad recoveries, will be a small percentage in comparison to the huge capital formation that is taking place. If you can combine compulsory insurance at your cost with sufficient credit, you will revolutionise the economic structure of rural India, and make it a base of our national economy. I have also no doubt that a new dimension will be added to farm credit management by the implementation of Prime Ministe'r 20-point economic programme which lays special emphasis on land reforms, land ceiling and liquidation of rural indebtedness.

(From the inaugural speech at the Seventh International Study Programme in Farm Credit Management held at Madras.)

Electromagnetic Pipe Inspection

Natural gas leaks through rusted pipes may soon be a thing of the past in gas fields. A superior pipe casing inspection tool is being developed by Battelle's Columbus Laboratories of the U.S.A. to advance and improve the techniques now used in measuring the remaining thickness of downhole pipe casings.

According to John Flora, who will head the Battelle study team, a novel sensing device will be developed to detect pits, holes and wall-thinning in the steel pipe casings. Flora says that the proposed side-coil device electromagnetically couples to only a segment of the pipe circumference and therefore is ultra-sensitive to small pits and holes. It also provides more exact measurements of wall thickness than conventional measuring techniques.

Underground Water Travel

Most agricultural, urban, and industrial wastes wind up in the ground. How fast these wastes move or percolate through the soil to underground aquifers is important—particularly in the case of radio-active wastes that may need a long time to lose their deadly characteristics.

At a recent meeting of the American Geophysical Union, scientists of the U. S. Geological Survey reported on a newly developed method for predicting the time it will take various substances to percolate through the soil. They say that some substances move very quickly, travelling 135 metres down from the surface toward underground waters in less than thirty years. These fast-moving substances include chlorides used to purify drinking water. Slow-moving contaminants, such as caesium -137 and stront um-90 take more than 150 years to travel the same distances.

New Water-Purifying Plant

A new water-purifying plant has been developed by specialists in the Faculty of Marine Boilers at the Kaliningrad Technological Institute of the Fishing Industry. It can produce 25 tons of fresh water in 24 hours—enough to supply fishing vessels with all the water they need. The plant differs from existing ones by its small dimensions and reduced heat consumption. It pays its way fully on a single fishing trip. The installation has been patented in Great Britain, France, Norway and Sweden.

Bewitching Alka striking an attractive pose in the Tamil film "Madhana Maligai."

Soviet Audiences' Appreciation Of Indian Films

Writing about the recent Indian Film Festival held in Moscow, G. Repinskaya, a noted Soviet film critic has analysed the present trend in Indian film making and the change in the nature of Soviet audiences who go to see Indian films.

"Indian films" she says, "have long been popular with Soviet audiences, but the character of that popularity has changed and that is reflected even in the composition of the audience. Some years ago, the halls were filled with people who had come chiefly to hear Indian songs, which are truly fascinating, see some good camera work and have a pleasant cry over the touching plot of a film."

Today, however, there are many students among the audience, and students are generally known to be more after the idea content of a film rather than its capacity for entertainment, Repinskaya says. Among the people sitting in the hall, you could see critics from such serious publications as the "Art of the Cinema" journal, and people working at the research institute of the theory and the history of the Cinema. That means that at present India is not only capable of producing a great number of films annually, but that her motion pictures have become part of the world process of the development of the Cinema.

Soviet film-lovers are following with interested attention the development of realistic, social tendencies in India's film industry. They are familiar with the films "Interview" and "Sagina Mahato" which were shown at the Tashkent Festival, to say nothing of the pictures filmed by Satyajit Ray. "Svayamvaram" the picutre produced by Citralekha and directed by A. Gopalakrishnan, was warmly received by the Muscovites. Last summer, Mrinal Sen's "Chorus" got the Silver at the 9th Moscow Festival.

CONTEMPORARY THEME

"Judgement" opened the Indian Film Festival in Moscow as the film that illustrated most vividly the trend in contemporary Indian Cinema. In Judgement" and earlier in "Chorus", the directors make use of frank convention. In "Chorus", there is the castle-fortress which symbolises the powers that be beseiged by crowds of the unemployed. In "Judgement" it is the trial at which skeletons are the witnesses. People's ghosts tell the story of their lives, of injustices and the arbitrariness that brought them to their graves, and the judge convicts not one guilty person but the whole of society with all its social injustices. The film is symbolic from beginning to end. However, one perceives it as highly realistic cinema. One senses the true-to-life India in the narrative of the life of the simple people. It is not easy for the country to solve the problems it has inherited from the past. But those who have the courage to speak frankly of hardships and weaknesses, have the strength to fight them. That is why films that are far from amusing make one look optimistically to the future.

Idhu Sathyam

G. N. Velumani's "Idhu Sathyam" featuring Asokan and Chandrakantha and directed by K. Shankar, even today sustains audience interest. It has melodious and inspiring songs. Viswanathan-Ramamoorthy have set to tune the lyrics of Kannadasan. It provides an opportunity for the new timers to see and enjoy the fine acting of stars of yester years like T. S. Baliah, T. S. Dorairaj, Kannamba and Sriranjani.

From Western Flute To Indian Flute

By BHASKERAN THOMAS

The applause was deafening. Cheers rent the air. The occasion was a musical performance at a New York City auditorium. The players were only three in number, but their music with wind instruments was a match to any big ensemble.

It was also the trio's last performance, since one of the group was leaving for India to learn Carnatic music. Twenty-five-year old Deborah Marks, who played the Musical Recorder Instrument at the New York concert, is now a student at the Central College of Carnatic Music in Madras.

To Deborah, learning Carnatic music had been a long-time ambition. She had developed a taste for Indian music and culture while studying for her bachelor's degree in classical languages at the Columbia University in New York City. As a student she had opportunities to witness performances and concerts by famed Indian dancers and musicians. These spurred her into learning Indian music.

Deborah's fascination was for the Indian flute. She was already proficient in playing the Musical Recorder Instrument, which is very similar to the Indian flute. Though not as sophisticated, it sounds somewhat similar to the flute when played. "Since I had the background in a Western wind instrument, this was the line of least resistance for getting involved in Indian music," she says.

While at the university, Deborah was able to find an appropriate teacher in Vasant Roy, a disciple of the renowned sarod player Ustad Allaudin Khan.

Deborah's next ambition was to go over to India and pursue her interest at a full-fledged music college. So, after completing her studies, she joined a law firm as an assistant and earned the necessary resources required.

Coming to India in late 1975, Deborah joined the Central College of Carnatic Music in Madras for a three-year course. "I have been lucky that some of the most distinguished musicians are teaching at the college," she says. Among them are K.V. Narayanaswamy and her teacher T.R. Navaneetham.

Deborah does find Indian music somewhat difficult to learn "because it is very different from the musical tradition of West." But she is all praise for her teachers at the college who "give the best of encouragement." This has increased her determination to learn the difficult grace notes or the ghamakas. "I have been captivated by the melodies that I have learnt. They are simply beautiful and some of the ragas are very moving," she adds.

Deborah says that lovers of Indian music in her country are more familiar with Hindustani music than Carnatic music because of the impact of personalities like Ravi Shankar. "Further, Hindustani music is easily understood because it is less devotional," she observes.

Deborah has her own plans of educating her friends in Carnatic music. She hopes to give concerts in Carnatic music in her home state with the assistance of organisations like the Asia Society in New York City.

This young musician admits that as in the U.S. most people in India too are interested in popular music. But she affirms that popular music in India, despite its Western flavour, is very definitely Indian. "You can't mistake it for anything else and the traditions here are so strong that they will continue to have a viable musical tradition,' she adds.

Anaavaranam

The producers of the Malayalam film "Anaavaram", Cherupshpam Films (P) Ltd., were bold enough to introduce a host of new stars to the film world. And the new entrants have not let them down. All of them have done their parts well.

Vincent has directed the film ably and Thoppil Bhasi has written the dialogues for the story by P. K. Abraham. The lyrics are by Vayalar Rama Varma and Devarajan has set the tunes. Yesudas, Susheela, P. Leela and Madhuri have lent their voices.

The film is on show at Little Anand in the City.

Naradhan Keralathil

Film journalist A. Natarajan is writing the story and dialogue for Sastha Movies "Naradhan Keralathil" in Malayalam. Sasikumar is directing the film for producer Neelakantan. Cast in important roles are Bhasi (dual role as Narada and constable), Raghavan, Ummer, Vincent, Bahadur, Pappu, Ramchandra, Kanakadurga, Srilatha and KPAC Lalitha. V. Dakshinamurthy is incharge of music direction and Srikumaran Thambi will be composing the lyrics. Vani Jayaram, Suseela and Yesudas sing the songs.

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